

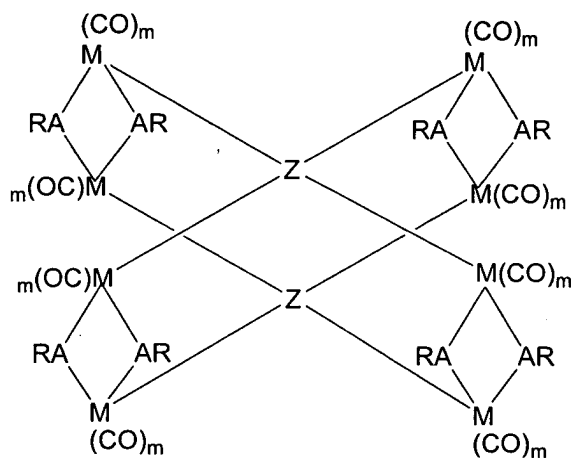
Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-22. (Cancelled)

23. (Currently Amended) A tetragonal prismatic supramolecule having the following structure:



wherein

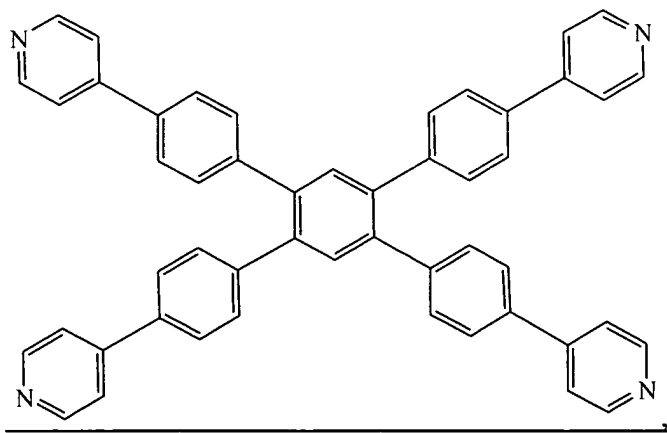
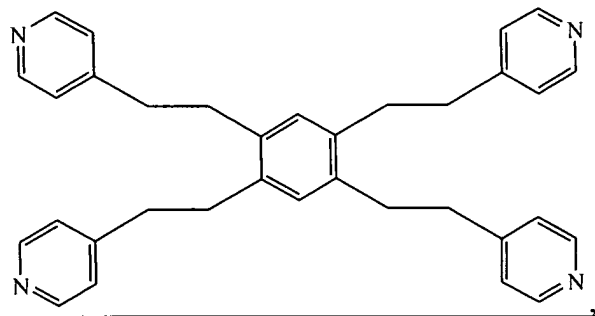
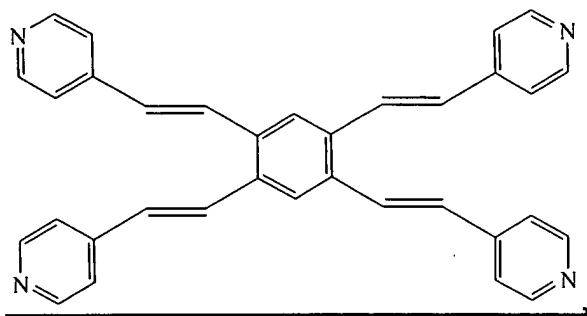
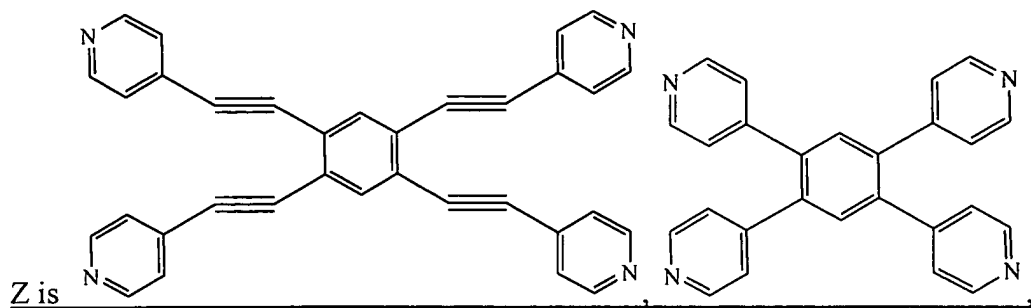
M is Re, Mn, Cr, Mo, W, Fe, Ru, or Os,

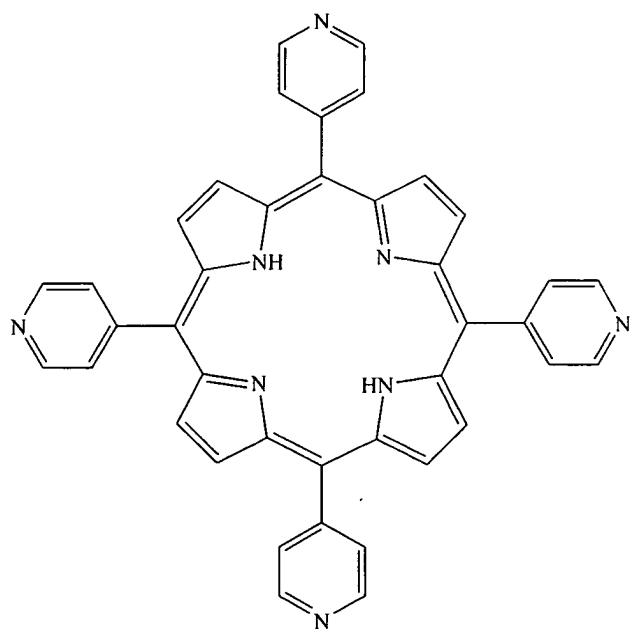
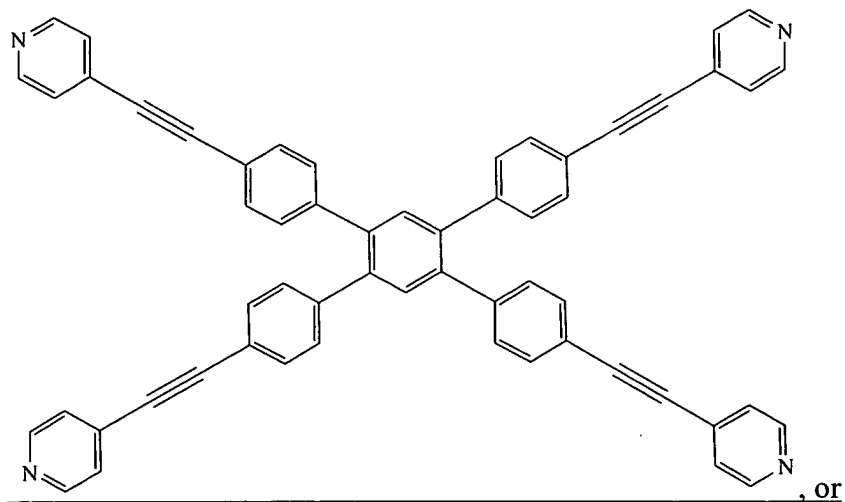
~~Z is a nitrogen-based tetradentate ligand, in which four nitrogen atoms are bonded to four metal atoms;~~

A is O, S, Se, or Te;

R is C₁~C₁₆ alkyl, (CH₂)_n-aryl, or (CH₂)_n-aryl-(O-C₁~C₁₆ alkyl)_p, in which n is 0-15, p is 1-3; ~~and~~

m is 1, 2, 3, or 4; and





24. (Original) The tetragonal prismatic supramolecule of claim 23, wherein M is Re.
25. (Original) The tetragonal prismatic supramolecule of claim 24, wherein m is 3.
26. (Original) The tetragonal prismatic supramolecule of claim 23, wherein R is C₁~C₁₆ straight chain alkyl.

27. (Original) The tetragonal prismatic supramolecule of claim 23, wherein A is O.

28-35. (Canceled)

36. (Original) A method for making a tetragonal prismatic supramolecule of claim 23, the method comprising reacting $M(\text{CO})_{m+2}$ with a nitrogen-based tetradentate ligand in the presence of an RAH at an elevated temperature to form the prismatic supramolecule, wherein M, m, R, and A are as defined in claim 23.

37. (Original) The method of claim 36, wherein M is Re and m is 3.

38. (Original) The method of claim 36, wherein RAH is a $\text{C}_1\sim\text{C}_{16}$ aliphatic alcohol.

39. (Canceled)

40. (Original) A composition for emitting luminescence at room temperature, comprising:
a tetragonal prismatic supramolecule of claim 23 and a solution.

41. (Original) The composition of claim 40, wherein M is Re and m is 3.

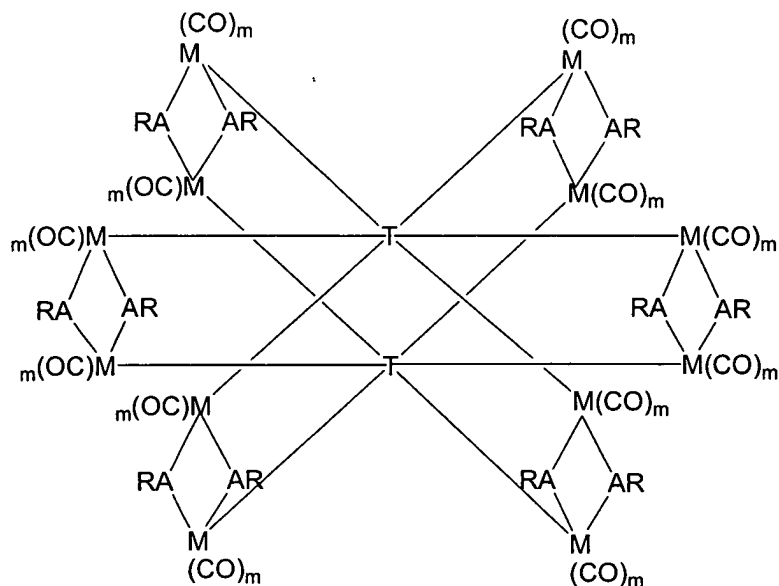
42. (Original) The composition of claim 40, wherein R is a $\text{C}_1\sim\text{C}_{16}$ aliphatic alkyl.

43. (Original) The composition of claim 40, wherein A is O.

44. (Canceled)

45. (Previously Presented) The composition of claim 40, wherein the solution is an organic or aqueous solution.

46. (Currently Amended) A hexagonal prismatic supramolecule having the following structure:



wherein

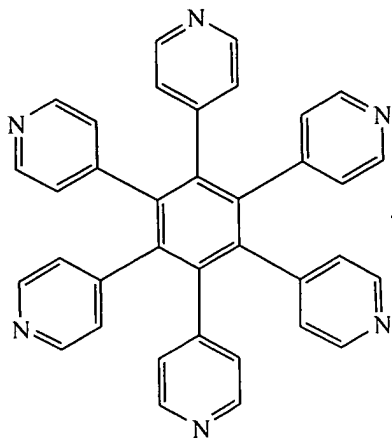
M is Re, Mn, Cr, Mo, W, Fe, Ru, or Os,

~~T is a nitrogen-based hexadentate ligand, in which six nitrogen atoms are bonded to six metal atoms;~~

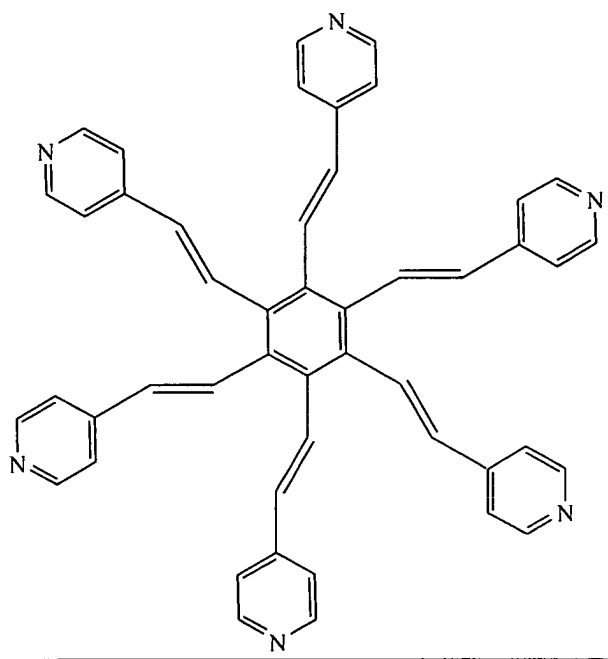
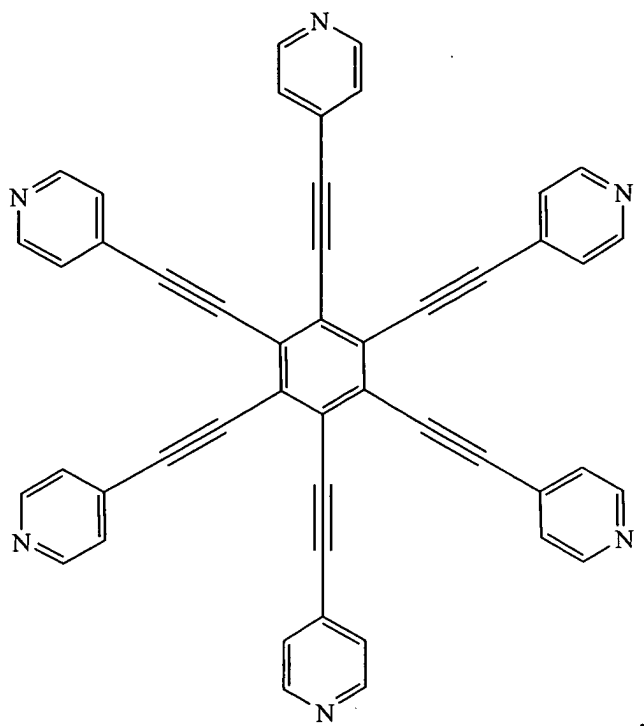
A is O, S, Se, or Te;

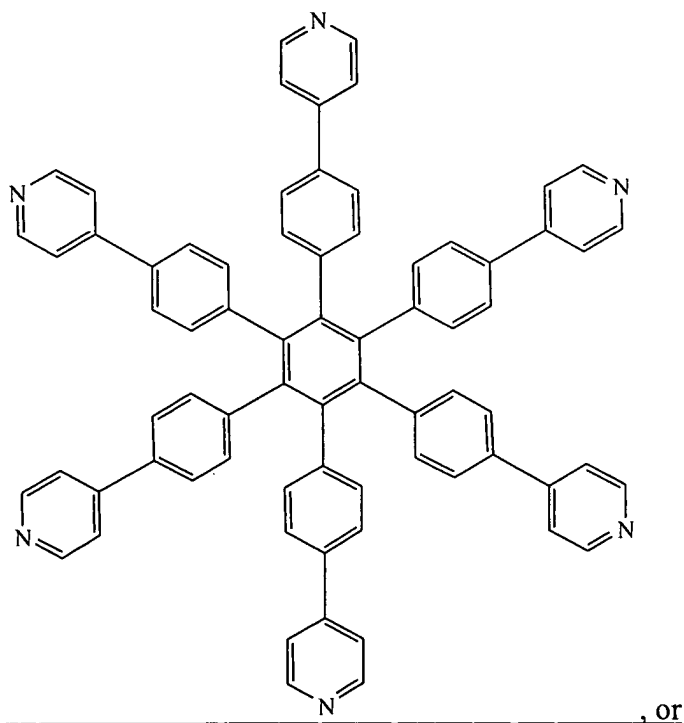
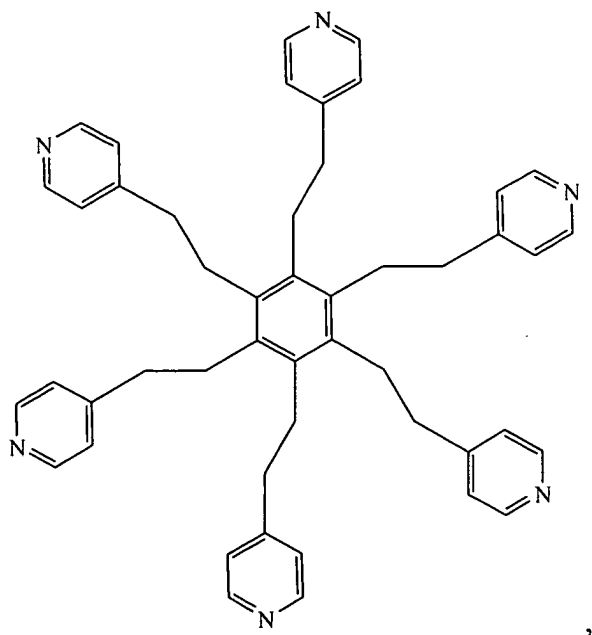
R is C₁~C₁₆ alkyl, (CH₂)_n-aryl, or (CH₂)_n-aryl-(O-C₁~C₁₆ alkyl)_p, in which n is 0-15, p is 1-3; ~~and~~

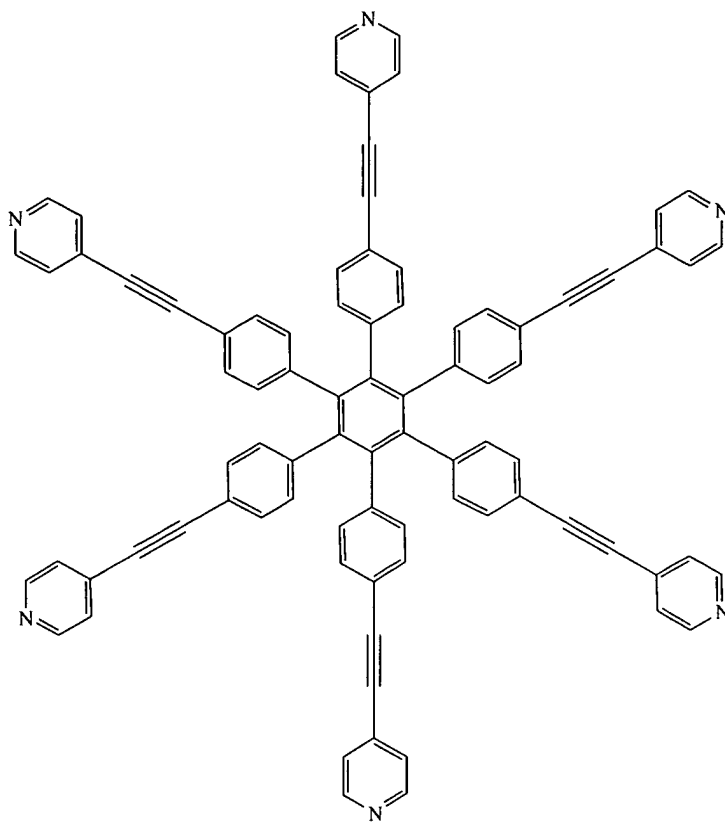
m is 1, 2, 3, or 4; and



T is _____,







47. (Original) The hexagonal prismatic supramolecule of claim 46, wherein M is Re.
48. (Original) The hexagonal prismatic supramolecule of claim 47, wherein m is 3.
49. (Original) The hexagonal prismatic supramolecule of claim 46, wherein R is C₁~C₁₆ straight chain alkyl.
50. (Original) The hexagonal prismatic supramolecule of claim 46, wherein A is O.
51. (Canceled)

52. (Original) A method for making a hexagonal prismatic supramolecule of claim 46, the method comprising reacting $M(\text{CO})_{m+2}$ with a nitrogen-based hexadentate ligand in the presence of an RAH at an elevated temperature to form the hexagonal prismatic supramolecule, wherein M, m, R, and A are as defined in claim 46.

53. (Original) The method of claim 52, wherein M is Re and m is 3.

54. (Original) The method of claim 52, wherein RAH is a $\text{C}_1\sim\text{C}_{16}$ aliphatic alcohol.